FORM PTO-1390 (REV. 12-2001) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY 'S DOCKET NUMBER	
DN1999215USA	
U.S. APPLICATION NO. (If known, see 37 CFR 1.5	
10/069301	

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/US99/23688	October 14, 1999	

TITLE OF INVENTION
PART NUMBER IDENTIFICATION TAG

APPLICANT(S) FOR DO/EO/US
John Eric Arnold

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. [ ] This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. [X] The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. [ ] is attached hereto (required only if not communicated by the International Bureau).
   b. [ ] has been communicated by the International Bureau.
   c. [X] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [ ] An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
   a. [ ] is attached hereto.
   b. [ ] has been previously submitted under 35 U.S.C. 154(d)(4).
7. [X] Amendments to the claims of the International Aplication under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [ ] are attached hereto (required only if not communicated by the International Bureau).
   b. [ ] have been communicated by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [X] have not been made and will not be made.
8. [ ] An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).
9. [X] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] An English lanugage translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

11. [X] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [ ] A FIRST preliminary amendment.
14. [ ] A SECOND or SUBSEQUENT preliminary amendment.
15. [ ] A substitute specification.
16. [ ] A change of power of attorney and/or address letter.
17. [ ] A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
18. [ ] A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. [ ] A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. [X] Other items or information:

International Search Report
International Preliminary Examination Report

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
10/069301	PCT/US99/23688	DN1999215USA

21. [X] The following fees are submitted:	CALCULATIONS PTO USE ONLY	
BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1040.00**		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO **$890.00**		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$740.00**		
International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$710.00**		
International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) **$100.00**		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 890.00	
Surcharge of **$130.00** for furnishing the oath or declaration later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$	

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	4 - 20 =	0	x **$18.00**	$	
Independent claims	1 - 3 =	0	x **$84.00**	$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ **$280.00**	$	
TOTAL OF ABOVE CALCULATIONS =				$	
[ ] Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.			+	$	
SUBTOTAL =				$	
Processing fee of **$130.00** for furnishing the English translation later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				$	
TOTAL NATIONAL FEE =				$	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property +				$	
TOTAL FEES ENCLOSED =				$ 890.00	
				Amount to be refunded:	$
				charged:	$

a. [ ] A check in the amount of $ _____ to cover the above fees is enclosed.

b. [X] Please charge my Deposit Account No. 07-1725 in the amount of $ 890.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. [X] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 07-1725 . A duplicate copy of this sheet is enclosed.

d. [ ] Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

SIGNATURE

Nancy T Krawczyk
NAME

38,744
REGISTRATION NUMBER

cc: J E Grillo

PART NUMBER IDENTIFICATION TAG

Technical Field

The present invention is directed to an identification tag. More specifically, a permanently attached identification tag for circular articles is disclosed.

Background Art

It is a known and conventional practice to label articles of manufacture. Such labels range from simple paper labels with alphanumeric characters to bar code labels. The form of label or its content may be selected depending upon the type of inventory means or the end use of the article.

Exemplary tags for articles include, but are not limited to, those disclosed in US Patents 4,169,326 (a tag secured by a wire loop under a crimped end plate), 4,900,637 (a metal tag dropped in molten material that floats in the material and becomes a integral part of the formed article), 5,249,380 (a tri-fold tag holder for the neck of a gas cylinder), 5,555,655 (a ring tag with tabs for the neck of a gas cylinder), and 5,924,739 (a tear away paper tag for the neck of a bottle).

In the automotive industry, it is common to adhesively apply a paper tag to an automotive part. Such tags are useful for identifying the proper part size and type when the part must be replaced. The adhesive tags are placed at any location on the part where the label will adhere. However, since the undercarriage and the engine of an automobile is subject to extremes in temperature and weather conditions, these labels often become dirty, torn, and illegible. Thus it is desired to provide a more permanent identification tag for an automotive part.

US Patent 5,947,672 discloses one type of automotive part identification tag. The metallic tag is circular and fits over a lube oil plug. Since an identification tag is suitable for projecting auto parts, but is not suitable for auto parts which do not have a projection portion over which the disclosed tag may be placed and then easily viewed.

The present invention is directed to an identification tag that overcomes the limitations of the known prior art identification means. While the inventive identification tag is disclosed as being used with an airspring, the tag may be used with a variety of manufactured articles wherein a conventional paper tag is insufficient to provide life-long identification of the article.

Summary of the Invention

The present invention is directed to an improved airspring, or similar manufactured article. The manufactured article is comprised of a flexible cylindrical sleeve having a first and second end. The sleeve is secured at one of the ends by a retainer. The article is provided with a tag made from a sheet material. The improvement in the manufactured article is that a portion of the tag is non-removably secured between the sleeve and the retainer.

In one aspect of the invention, the tag is formed from a flexible plastic or elastomeric

material.

In another aspect of the invention, the portion of the tag that is secured between the sleeve and the retainer, prior to being secured between the sleeve and the retainer, has a molded configuration corresponding to the shaped configuration of the sleeve end.

In another aspect of the invention, prior to being secured between the sleeve and the retainer, the tag has a molded circumferential curvature corresponding to the outer curvature of the cylindrical sleeve.

Brief Description of Drawings

The invention will be described by way of example and with reference to the accompanying drawings in which:

FIG. 1 illustrates an assembled and tagged air spring;

FIG. 2 illustrates the method of applying the tag to an airspring; and

FIG. 3 illustrates a tag formed in accordance with the present invention.

Detailed Description of the Invention

One end of a conventional airspring 10 is illustrated in FIG. 1. As noted above, the inventive identification tag 12 is disclosed as being used with an airspring 10, but may be used with a variety of manufactured articles in the manner disclosed below. The airspring 10 has a retainer 14 that secures a first end of the elastomeric sleeve 16. The retainer 14 is provided with at least one securing bolt 18 and an air passage 20 to permit the flow of gas into and out of the chamber created when the sleeve 16 is secured at the opposing end (not illustrated). The airspring sleeve 16 is a reinforced elastomeric tube and is constructed in a rolling lobe configuration or a bellows configuration; both sleeve constructions are known to those in the art. In a rolling lobe airspring, the opposing end of the sleeve 16 is typically secured by a retainer and piston; and in a bellows airspring, the opposing end of the sleeve 16 is secured by a crimped retainer. Secured by the retainer 14, and held against the sleeve 16, is the inventive identification tag 12.

The end 22 of the sleeve 16 has an inextensible bead ring 24, see FIG 2. The bead ring 24 is at least one continuous winding of wire, preferably steel. The sleeve end 22 is shaped about the bead ring 24. When the airspring 10 is assembled, an uncrimped retainer 14 is placed inside a punch pot 26 and the sleeve end 22 is inserted into the retainer 14. Prior to inserting the sleeve end 22 into the retainer 14, the inventive identification tag 12 is secured to the sleeve end 22. The edges 28 of the retainer 14 are crimped about the bead ring 24 and sleeve end 22 to form an airtight seal between the retainer 14 and the sleeve end 22. Crimping of the retainer 14 about the sleeve end 22 also secures the tag 12 to the airspring 10.

As seen in cross-section, the tag 12 is a singular piece having an S-shaped configuration with an extending end. The curvature of the identification portion 30 of the tag 12, that is, the portion of the tag 12 which is provided with the identifying indicia 32, is selected to correspond to the axial curvature A of the sleeve 14 (see FIG 1), preferably when the airspring is nominally inflated. Because of the variance in curvature of the sleeve 14 when the airspring 10 is operated, the length of the identification portion 30 of the tag 12 should not extend any substantial distance down the side of the sleeve 12. The crimping portion 34 of the tag 12 is configured to correspond to the configuration of the shaped sleeve end 22. The tag 12 is also defined by a radius of curvature in the circumferential direction C of the sleeve 14.

The tag 12 is formed from any suitable material that will provide a long life to the tag and survive the conditions to which the airspring 10 and the tag 12 will be subjected. The same materials used in the manufacture of the airspring 10 may be used to form the tag 12. The material used may be any durable thermoplastic, thermoset, or thermoelastic sheet material. Examples of suitable materials include, but are not limited to, reinforced nylon, reinforced thermoplastic, and elastomer reinforced by fiber loading or a reinforcement layer sufficient to provide shape to the tag 12 while maintaining flexibility.

The identifying indicia 32 on the tag 12 may be provided in one of many ways, or a combination of methods, depending upon the desired information to be conveyed. A first method of providing the indicia 32 is to punch-out the desired information. This method is preferred for information desired to be provided over the life of the airspring 10, and is also suitable for information that is common to a large number of automotive parts produced that are to be tagged. So that the indicia 32 are easier to read, the tag 12 color should contrast with the color of the sleeve 14. A second method of providing the indicia 32 is to stamp the indicia 32 onto the tag without completely penetrating the tag 12. The indentation marks may then be inked in to provide any desired contrast. Indentation of indicia 32 is also useful for information to be provided over the life of the manufactured article. The third method of providing the indicia 32 is to imprint the information onto tag 12 as accomplished conventionally with other identification methods. This method is best suited for providing information of the nature that changes. Any combination of these methods may also be used. Other known conventional methods of providing indicia are also suitable and within the scope of the invention, so long as the information is provided in a manner which will last the lifetime of the airspring 10 and tag 12.

The type of information provided by the indicia 32 is dependent upon the type of manufactured article. For the exemplary airspring 10, such information may include, but is

not limited to, the airspring assembly number, manufacture codes, and plant codes. For ease of marking, all of the provided indicia 32 are provided on the tag 12 prior to placing the tag 12 onto the shaped sleeve end 22. The presentation of the indicia 32 may be alphanumeric, as illustrated, or bar code.

The inventive tag 12 allows for easier future replacement of the airspring by retaining the assembly part number or other necessary information. The tag 12 is more durable than conventional adhesive paper labels applied to the retainer 14. The tag 12 is also easier to apply and less costly than ink transfer to the air sleeve of the airspring, especially for bellows airspring sleeves, which, due to the configuration of the airsleeve, are not easily ink labeled by conventional ink transfer methods.

CLAIMS

What is claimed is:

1. An improved airspring 10 comprising a flexible cylindrical sleeve 16 having a first and second end, a retainer 14 secured to one of the ends 22 of the sleeve 16, and a tag 12 made from a sheet material, the improvement comprising:

   a portion of the tag 12 being non-removably secured between the sleeve 16 and the retainer 14.

2. An improved airspring 10 in accordance with claim 1 wherein the tag 12 is of a flexible plastic or elastomeric material.

3. An improved airspring 10 in accordance with claim 1 wherein the portion of the tag 12 that is secured between the sleeve 16 and the retainer 14, prior to being secured between the sleeve 16 and the retainer 14, has a shaped configuration corresponding to the shaped configuration of the sleeve end 22.

4. An improved airspring 10 in accordance claim 1 wherein the tag 12, prior to being secured between the sleeve 16 and the retainer 14, has a molded circumferential curvature corresponding to the outer curvature of the cylindrical sleeve 16.

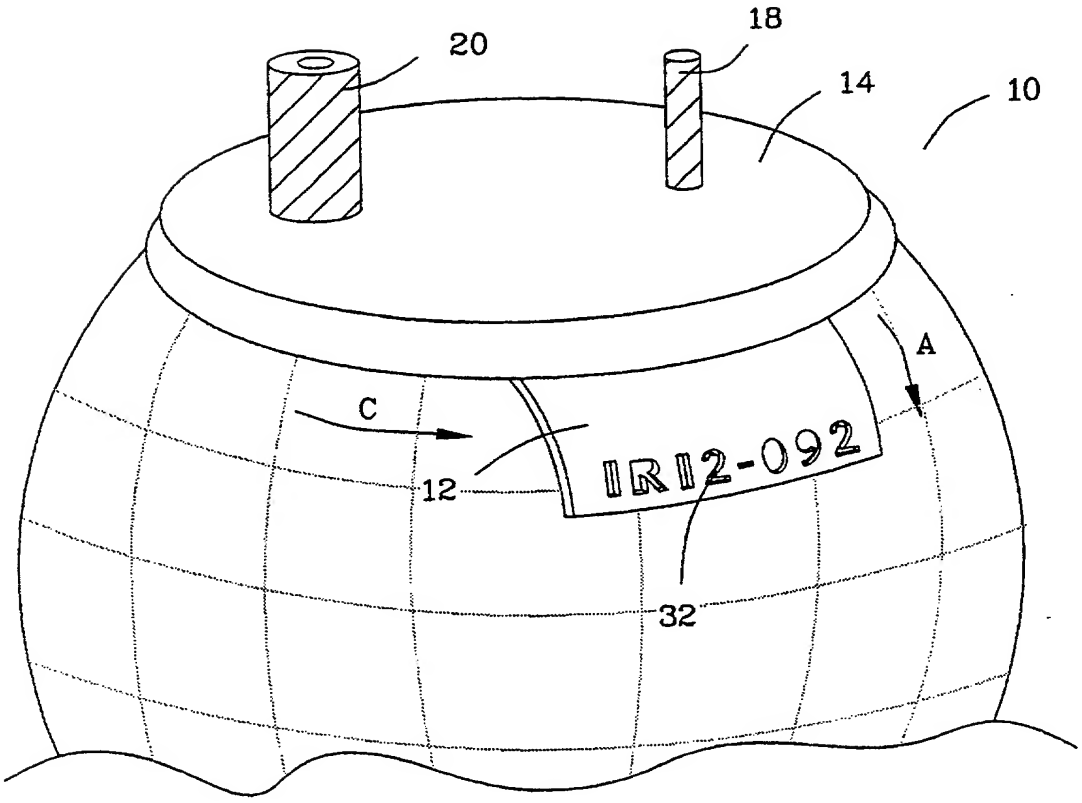

Fig 1

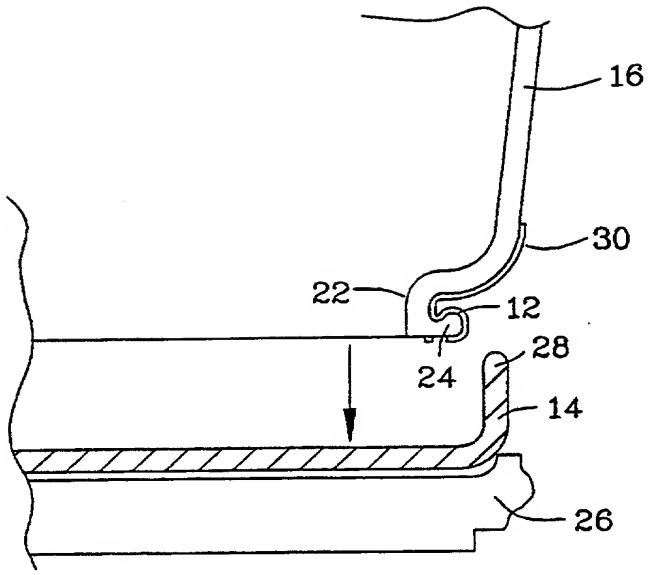

Fig 2

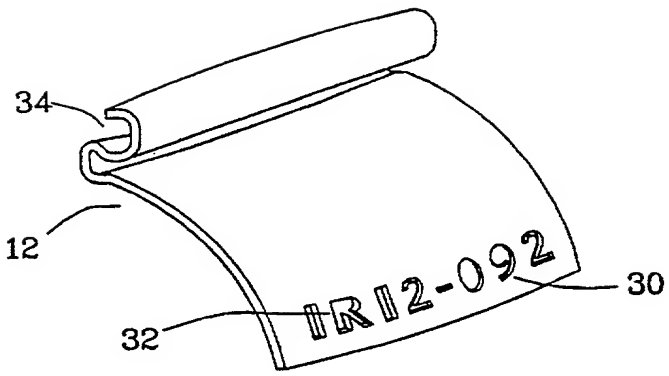

Fig 3

Docket No. DN1999215USA

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **PART NUMBER IDENTIFICATION TAG** the specification of which (check one)

_____ a copy is attached hereto.

__X__ was filed on October 14, 1999 as Application Serial No. PCT/US99/23688

and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. §1.56.

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

_____ (Application Serial No.) _____ (Filing Date)

_____ (Application Serial No.) _____ (Filing Date)

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) or §365 of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. §1.56 which become between the filing date of the prior application and the national or PCT international filing date of this application:

_____ (Application Serial No.) (Filing Date) (Status)(patented, pending, abandoned)

_____ (Application Serial No.) (Filing Date) (Status)(patented, pending, abandoned)

POWER OF ATTORNEY

As named inventor(s), I or we hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

2

Nancy T Krawczyk Registration No. 38,744

David L King Registration No. 33,925

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of the application or any patent issuing thereon.

Full name of sole or ~~first~~ inventor (given name, family name) John Eric Arnold

Inventor's signature John Eric Arnold Date Feb 13, 2002

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